

PPE standards and requirement projections

8 August 2003

SARS Expert Committee
Request for Submissions from Hospital Authority (HA)

The SARS Expert Committee has requested for information on:

" PPE standards and requirement projections issued on 6th April"

The HA hereby submits the following response:

Decisions on changes in supply of PPE were made based on information gathered at the Directors' morning round-up meetings at HAHO. Decisions of the Directors were implemented through updated guidelines on management of SARS. In general, both sourcing and ordering action for every item of PPE were stepped up in advance of the revised Guidelines.

Use of surgical masks was recommended in all Guidelines. Central purchase of surgical masks was started from the last week of March. The stock of surgical masks remained steady throughout and the supply was able to meet the actual demand. The more liberal supply and unrestricted use were commenced from early April onwards.

The need for use of N95 respirators was known at the early stage of the SARS outbreak but the global supply was limited in spite of the BSS team's rigorous action to secure more from overseas suppliers. From 21.4.03, the supply of N95 respirators including the small size ones started to improve. N100 respirators were started to be centrally ordered since 22.4.03.

All along, goggles were used by frontline staff in some areas and from 1.4.03, it was recommended for universal use by all staff involved in high risk procedures. Additional orders were placed in first week of April. The stock level of goggles started to rise from 7.4.03. By 26.4.03, supply of goggles improved.

Face shields were similarly recommended for universal use by frontline staff from 1.4.03. Before sufficient numbers were purchased, the hospitals' Prosthetic and Orthotic units helped in producing small quantities of some locally made ones. From 14.4.03 onwards, the supply to staff began to improve and the stock level began to rise.

Attached are 9 self-explanatory tables (A - I) showing the changes in supply of each item of PPE against the dates of the changed Guidelines.

Hospital Authority
8 August 2003

Table A

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	^ No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
Goggles	# Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	24-Mar-2003	8	220	61	300
	* HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003		580	247	660
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		37,270	3,012	14,029
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		67,270	6,695	29,280
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		88,926	9,094	34,280
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		93,474	16,189	49,317
		31-May-2003		97,474	20,758	52,317

Remarks : # Recommended PPE for precaution

* Commencement of central purchase in 1st week of April, 2003

^ 15 models evaluated but 6 models rejected

Table B

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	^ No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
Eye Shields *#	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003	5	500	-	500
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		630,000	163,520	217,500
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		630,000	219,827	330,000
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		630,000	224,664	445,000
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		630,000	344,638	851,000
		31-May-2003		1,171,000	342,619	851,000

Remarks : # Recommended PPE for precaution

* Commencement of central purchase in 1st week of April, 2003

^ 5 models evaluated but 4 models rejected

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	^ No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
Face Shield *#	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003	8	620	-	620
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		684,680	28,151	73,160
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		842,080	36,774	143,060
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		1,272,080	65,097	251,260
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		1,942,080	208,206	611,660
		31-May-2003		1,942,080	261,816	849,860

Remarks : # Recommended PPE for precaution

* Commencement of central purchase in 1st week of April, 2003

^ 12 models evaluated but 4 models rejected

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	[^] No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
Surgical Masks #	FAQ in the Management of Severe Community Acquired Pneumonia	7-Mar-2003	40	530,000	432,835	-
	Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	19-Mar-2003		530,000	432,835	530,000
	* Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	24-Mar-2003		530,000	620,000	780,000
	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003		9,046,000	1,112,845	4,307,000
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		48,625,600	4,212,220	9,939,100
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		48,625,600	4,557,280	11,749,100
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		48,625,600	4,460,442	13,676,100
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		48,625,600	5,054,833	15,961,300
		31-May-2003		48,625,600	5,946,039	19,059,300

Remarks : # Recommended PPE for precaution

* Commencement of Central Purchase in 4th week of March, 2003

[^] 40 models evaluated but 8 models rejected

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	[^] No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
N95 Respirators, Small ^{*#}	Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	24-Mar-2003	7	61,000	46,000	61,000
	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003		177,400	50,739	177,400
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		377,800	82,839	377,800
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		406,600	70,186	406,600
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		441,280	46,933	441,280
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		581,187	100,708	581,187
		31-May-2003		640,657	98,648	640,657

Remarks : # Recommended PPE for precaution

* Commencement of Central Purchase in 4th week of March, 2003

[^] 9 models evaluated but 4 models rejected

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	^ No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
N95 Respirator, Regular	*# Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	24-Mar-2003	11	58,730	46,130	58,730
	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003		82,730	138,668	82,730
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		166,690	208,722	166,690
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		226,890	185,824	226,890
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		300,290	162,031	300,290
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		546,910	296,376	546,910
		31-May-2003		549,010	281,270	549,010

Remarks : # Recommended PPE for precaution

* Commencement of Central Purchase in 4th week of March, 2003

^ 14 models evaluated but 11 models rejected

Table G

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	[^] No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
N100 Respirator *		30-Apr-2003	3	25,000	17,520	25,000
	# SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		59,390	41,402	59,390
		31-May-2003		59,390	41,478	59,390

Remarks : # Recommended PPE for precaution

* Commencement of central purchase in 4th week of April, 2003

[^] 2 models evaluated

Table H

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	[^] No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
Disposable Isolation Gown - Water Repellent	# Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	19-Mar-2003	9	75,000	13,950	75,000
	* Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	24-Mar-2003		92,500	24,131	75,000
	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003		1,253,600	231,743	221,000
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		11,491,600	681,041	1,231,000
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		11,491,600	1,151,552	1,800,300
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		11,491,600	1,450,126	2,519,300
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		11,491,600	1,433,519	2,866,250
		31-May-2003		11,491,600	1,444,352	2,926,650

Remarks : # Recommended PPE for precaution

* Commencement of Central Purchase in 4th week of March, 2003

[^] 13 models evaluated but 2 models rejected

Changes in Supply of PPE in response to Changes in Guidelines

PPE	Guidelines	Date of Guidelines	[^] No. of Suppliers Sourced	Cummulative Quantity Ordered (Firm Order - pc.)	Actual Closing Stock (pc.)	Cummulative Delivered Quantity (pc.)
Disposable Isolation Gown - Fluid Resistant *#	Guideline on the Management of Severe Acute Respiratory Syndrome (SARS)	24-Mar-2003	12	3,000	600	3,000
	HA Guideline on the Management of Severe Acute Respiratory Syndrome	6-Apr-2003		4,000	9,490	3,000
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-Apr-2003		4,833,700	160,380	181,700
	HA Information on the Management of Severe Acute Respiratory Syndrome	30-Apr-2003		5,590,700	210,259	428,700
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	10-May-2003		5,591,200	380,293	638,700
	SARS Precaution in Hospitals - Infection Control & Risk Management Approach	24-May-2003		5,591,200	917,871	1,172,400
		31-May-2003		5,591,200	983,433	1,657,200

Remarks : # Recommended PPE for precaution

* Commencement of Central Purchase in 4th week of March, 2003

[^] 12 models evaluated but 4 models rejected